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AMENDMENTS TO THE CLAIMS

Please enter the following amendments without prejudice or disclaimer.

This listing of claims will replace all prior versions, and listings, of claims in the application.

In the claims:

1-23. (Canceled)

24. (Currently amended) A method of reducing or moderating a postprandial rise in plasma glucose in a mammal comprising administering to said mammal an amylin or an amylin agonist analogue in an amount effective to reduce or moderate a postprandial rise in plasma glucose, wherein the amylin agonist analogue is a peptide.

25. (Previously presented) The method of claim 24 wherein the amylin agonist is an amylin agonist analogue having the following amino acid sequence:

¹A₁-X-Asn-Thr-⁵Ala-Thr-Y-Ala-Thr-¹⁰Gln-Arg-Leu-B₁-Asn-¹⁵Phe-Leu-C₁-D₁-E₁-²⁰F-²¹
G₁ Asn-H₁-Gly-²⁵Pro-I₁-Leu-Pro-J₁-³⁰Thr-K₁-Val-Gly-Ser-³⁵Asn-Thr-Tyr-Z

wherein

A₁ is Lys, Ala, Ser or Hydrogen;

B₁ is Ala, Ser or Thr;

C₁ is Val, Leu or Ile;

D₁ is His or Arg;

E₁ is Ser or Thr;

F₁ is Ser, Thr, Gln or Asn;

G₁ is Asn, Gln or His;

H₁ is Phe, Leu or Tyr;

I₁ is Ile, Val, Ala or Leu;

J₁ is Ser, Pro or Thr;

K₁ is Asn, Asp or Gln;

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X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is Arg, E₁ is Ser, F₁ is Ser, G₁ is Asn, H₁ is Leu, I₁ is Val, J₁ is Pro, and K₁ is Asn; then one or more A₁ to K₁ is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

26. (Previously presented) The method of claim 24 wherein the amylin agonist is an amylin agonist analogue having the following amino acid sequence:

¹A₁-X-Asn-Thr-⁵Ala-Thr-Y-Ala-Thr-¹⁰Gln-Arg-Leu-B₁-Asn-¹⁵Phe-Leu-C₁-D₁-E₁-²⁰F₁-G₁-Asn-H₁-Gly-²⁵Pro-I₁-Leu-J₁-Pro-³⁰Thr-K₁-Val-Gly-Ser-³⁵Asn-Thr-Tyr-Z

wherein

A₁ is Lys, Ala, Ser or hydrogen;
B₁ is Ala, Ser or Thr;
C₁ is Val, Leu or Ile;
D₁ is His or Arg;
E₁ is Ser or Thr;
F₁ is Ser, Thr, Gln or Asn;
G₁ is Asn, Gln or His;
H₁ is Phe, Leu or Tyr;
I₁ is Ile, Val, Ala or Leu;
J₁ is Ser, Pro, Leu, Ile or Thr;
K₁ is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy, and provided that

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when

- (a) A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is Arg, E₁ is Ser, F₁ is Ser, G₁ is Asn, H₁ is Leu, I₁ is Val, J₁ is Pro and K₁ is Asn; or
- (b) A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is His, E₁ is Ser, F₁ is Asn, G₁ is Asn, H₁ is Leu, I₁ is Val, J₁ is Ser and K₁ is Asn;

then one or more of A₁ to K₁ is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

27. (Previously presented) The method of claim 24 wherein the amylin agonist is an amylin agonist analogue having the following amino acid sequence:

¹A₁-X-Asn-Thr-⁵Ala-Thr-Y-Ala-Thr-¹⁰Gln-Arg-Leu-B₁-Asn-¹⁵Phe-Leu-C₁-D₁-E₁-²⁰F₁-G₁-Asn-H₁-Gly-²⁵I₁-J₁-Leu-Pro-Pro-³⁰Thr-K₁-Val-Gly-Ser-³⁵Asn-Thr-Tyr-Z

wherein

- A₁ is Lys, Ala, Ser or hydrogen;
- B₁ is Ala, Ser or Thr;
- C₁ is Val, Leu or Ile;
- D₁ is His or Arg;
- E₁ is Ser or Thr;
- F₁ is Ser, Thr, Gln or Asn;
- G₁ is Asn, Gln or His;
- H₁ is Phe, Leu or Tyr;
- I₁ is Ala or Pro;
- J₁ is Ile, Val, Ala or Leu;
- K₁ is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that

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when A_1 is Lys, B_1 is Ala, C_1 is Val, D_1 is Arg, E_1 is Ser, F_1 is Ser, G_1 is Asn, H_1 is Leu, I_1 is Pro, J_1 is Val and K_1 is Asn; then one or more of A_1 to K_1 is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

28. (Previously presented) The method of claim 24 wherein the amylin agonist is an amylin agonist analogue having the following amino acid sequence:

1A_1 -X-Asn-Thr- 5 Ala-Thr-Y-Ala-Thr- 10 Gln-Arg-Leu- B_1 -Asn- 15 Phe-Leu- C_1 - D_1 - E_1 - $^{20}F_1$ - G_1 -Asn- H_1 -Gly- 25 Pro- I_1 -Leu-Pro-Pro- 30 Thr- J_1 -Val-Gly-Ser- 35 Asn-Thr-Tyr-Z

wherein

A_1 is Lys, Ala, Ser or hydrogen;

B_1 is Ala, Ser or Thr;

C_1 is Val, Leu or Ile;

D_1 is His or Arg;

E_1 is Ser or Thr;

F_1 is Ser, Thr, Gln or Asn;

G_1 is Asn, Gln or His;

H_1 is Phe, Leu or Tyr;

I_1 is Ile, Val, Ala or Leu

J_1 is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that when A_1 is Lys, B_1 is Ala, C_1 is Val, D_1 is Arg, E_1 is Ser, F_1 is Ser, G_1 is Asn, H_1 is Leu, I_1 is Val and J_1 is Asn; then one or more of A_1 to J_1 is a D-amino acid and Z is selected from the group consisting of alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy.

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29. (Previously presented) The method of claim 24 wherein said amylin agonist is any one of $^{18}\text{Arg}^{25,28}\text{Pro-h-amylin}$, $\text{des}^1\text{Lys}^{18}\text{Arg}^{25,28}\text{Pro-h-amylin}$, $^{25,28,29}\text{Pro-h-amylin}$, $\text{des}^1\text{Lys}^{25,28,29}\text{Pro-h-amylin}$, $^{18}\text{Arg}^{25,28,29}\text{Pro-h-amylin}$, $\text{des}^1\text{Lys}^{18}\text{Arg}^{25,28,29}\text{Pro-h-amylin}$, $^{25}\text{Pro}^{26}\text{Val}^{28,29}\text{Pro-h-amylin}$, or $\text{des}^1\text{Lys}^{25}\text{Pro}^{26}\text{Val}^{28,29}\text{Pro-h-amylin}$.

30. (Previously presented) The method of claim 24 wherein the amylin agonist is $^{25,28,29}\text{Pro-h-amylin}$.

31-37. (Canceled)

38. (Previously presented) The method of claim 24 wherein the mammal has diabetes.

39. (Previously presented) The method of claim 38 wherein the diabetes is type 1.

40. (Previously presented) The method of claim 38 wherein the diabetes is type 2.

41. (Previously presented) The method of claim 25 wherein the mammal has diabetes.

42. (Previously presented) The method of claim 41 wherein the diabetes is type 1.

43. (Previously presented) The method of claim 41 wherein the diabetes is type 2.

44. (Previously presented) The method of claim 26 wherein the mammal has diabetes.

45. (Previously presented) The method of claim 44 wherein the diabetes is type 1.

46. (Previously presented) The method of claim 44 wherein the diabetes is type 2.

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47. (Previously presented) The method of claim 27 wherein the mammal has diabetes.

48. (Previously presented) The method of claim 47 wherein the diabetes is type 1.

49. (Previously presented) The method of claim 47 wherein the diabetes is type 2.

50. (Previously presented) The method of claim 28 wherein the mammal has diabetes.

51. (Previously presented) The method of claim 50 wherein the diabetes is type 1.

52. (Previously presented) The method of claim 50 wherein the diabetes is type 2.

53. (Previously presented) The method of claim 30 wherein the mammal has diabetes.

54. (Previously presented) The method of claim 53 wherein the diabetes is type 1.

55. (Previously presented) The method of claim 53 wherein the diabetes is type 2.

56. (Previously presented) The method of claim 24 wherein the amylin agonist is an amylin agonist analogue having the following amino acid sequence:

¹A₁-X-Asn-Thr-⁵Ala-Thr-X-Ala-Thr-¹⁰Gln-Arg-Leu-B₁-Asn-¹⁵Phe-Leu-C₁-D₁-E₁-²⁰F₁-G₁-Asn-H₁-Gly-²⁵I₁-J₁-Leu-K₁-L₁-³⁰Thr-M₁-Val-Gly-Ser-³⁵Asn-Thr-Tyr-Z

wherein

A₁ is Lys, Ala, Ser, Hydrogen or acetylated Lys;

B₁ is Ala, Ser or Thr;

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C₁ is Val, Leu or Ile;
D₁ is His or Arg;
E₁ is Ser or Thr;
F₁ is Ser, Thr, Gln or Asn;
G₁ is Asn, Gln or His;
H₁ is Phe, Leu or Tyr,
I₁ is Ala or Pro;
J₁ is Ile, Val, Ala or Leu;
K₁ is Ser, Pro, Leu, Ile or Thr;
L₁ is Ser, Pro or Thr;
M₁ is Asn, Asp or Gln;

X and Y are independently selected residues having side chains which are chemically bonded to each other to form an intramolecular linkage, wherein said intramolecular linkage comprises a disulfide bond, a lactam or a thioether linkage; and Z is an amino, alkylamino, dialkylamino, cycloalkylamino, arylamino, aralkylamino, alkyloxy, aryloxy or aralkyloxy; and provided that

(a) when A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is His, E₁ is Ser, F₁ is Ser, G₁ is Asn, H₁ is Phe, I₁ is Ala, J₁ is Ile, K₁ is Ser, L₁ is Ser, and M₁ is Asn;

(b) when A₁ is Lys, B₁ is Ala, C₁ is Ile, D₁ is Arg, E₁ is Ser, F₁ is Ser, G₁ is Asn, H₁ is Leu, I₁ is Ala, J₁ is Ile, K₁ is Ser, L₁ is Pro, and M₁ is Asn;

(c) when A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is Arg, E₁ is Thr, F₁ is Ser, G₁ is Asn, H₁ is Leu, I₁ is Ala, J₁ is Ile, K₁ is Ser, L₁ is Pro, and M₁ is Asn;

(d) when A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is Arg, E₁ is Ser, F₁ is Ser, G₁ is Asn, H₁ is Leu, I₁ is Pro, J₁ is Val, K₁ is Pro, L₁ is Pro, and M₁ is Asn;

(e) when A₁ is Lys, B₁ is Ala, C₁ is Val, D₁ is His, E₁ is Ser, F₁ is Asn, G₁ is Asn, H₁ is Leu, I₁ is Pro, J₁ is Val, K₁ is Ser, L₁ is Pro and M₁ is Asn; or

(f) when A₁ is Lys, B₁ is Thr, C₁ is Val, D₁ is Arg, E₁ is Ser, F₁ is Ser, G₁ is His, H₁ is Leu, I₁ is Ala, J₁ is Ala, K₁ is Leu, L₁ is Pro and M₁ is Asp;

then one or more of any of A₁ to M₁ is not an L-amino acid and Z is not amino.

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57. (Previously presented) The method of claim 56 wherein the mammal has diabetes.
58. (Previously presented) The method of claim 57 wherein the diabetes is type 1.
59. (Previously presented) The method of claim 57 wherein the diabetes is type 2.
- 60-69. (Canceled)

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